The Visual World Eye-Tracking Paradigm and Special Populations

Irina A. Sekerina

January 2013

1 Seminar 1 (7 January): Introduction

- 1. The eye and eye movements
- 2. Types of eye-trackers
- 3. Eye movements in reading
- Eye movements in speech: The Visual World Eye-Tracking Paradigm (VWP)
 [4] Cooper (1974)
 - [24] Trueswell and Tanenhaus (2004)
- 5. Practicalities of the VWP
- 6. Topics in the VWP research
 - [11] Huettig et al. (2011)
 - [22] Tanenhaus et al. (1995)
- 7. The VWP Example: Spoken-word recognition (the Cohort Effect)
 [1] Allopenna et al. (1998)
 [5] Dahan et al. (2000)

2 Seminar 2 (14 January): Children

- 1. Development of eye-movement control in children
- 2. The Looking-While-Listening Paradigm
 - [8] Fernald et al. (2008)
 - [21] Swingley and Aslin (2000)
 - [12] Lew-Wiliams and Fernald (2007)
- The VWP and development of processing strategies in children [23] Trueswell et al. (1999)

- 4. Topics in the VWP research with children Binding Theory: [3] Clackson et al. (2011) Constrast and prosody in Russian: [20] Sekerina and Trueswell (2012) Contrast and adjectives: [10] Huang and Snedeker (2012) Universal quantifier *every* in Japanese: [17] Minai et al. (2012)
- 5. The VWP and SLI children [15] McMurray et al. (2010)

3 Seminar 3 (21 January): People with Aphasia

- Spoken word recognition (the Cohort Effect) in aphasia
 [18] Mirman et al. (2011)
- Processing of sentences with syntactic dependencies in aphasia Wh-movement: [6] Dickey et al. (2007)
 NP-movement: [7] Dickey et al. (2009)
 Passives: [16] Meyer et al. (2012)
 Scrambling in German: [9] Hanne et al. (2011)

4 Seminar 4 (28 January): Bilinguals

- Spoken word recognition (the Cohort Effect) in bilinguals Russian-English: [14] Marian and Spivey (2003) Dutch-English: [25] Weber and Cutler (2004) French-English: [2] Chambers and Cooke (2009)
- Processing of grammatical gender in bilinguals Spanish-English: [13] Lew-Williams and Fernald (2010)
- Contrast and prosody in bilinguals Russian-English: [19] Sekerina and Trueswell (2011)

References

- Allopenna, P. D., Magnuson, J. S., and Tanenhaus, M. K. (1998). Tracking the time course of spoken word recognition using eye movements: Evidence for continuous mapping models. *Journal of Memory and Language, 38*, 419-439.
- [2] Chambers,C.G., and Cooke, H.(2009).Lexical competition during second-language listening: Sentence context, but not proficiency, constrains inteference from the native lexicon. Journal of Experimental Psychology: Learning, Memory, and Cognition, 35(4), 1029-1040.

- [3] Clackson, K., Felser, C., and Clahsen, H. (2011). Children's processing of reflexives and pronouns in English: Evidence from eye-movements during listening. *Journal of Memory* and Language, 65(2), 128-144.
- [4] Cooper, R. M. (1974). The control of eye fixation by the meaning of spoken language: A new methodology for the real-time investigation of speech perception, memory, and language processing. *Cognitive Psychology*, 6, 84-107.
- [5] Dahan, D., Swingley, D., Tanenhaus, M. K., and Magnuson, J. S. (2000). Linguistic gender and spoken-word recognition in French. *Journal of Language and Memory*, 42, 465-480.
- [6] Dickey, M. W., Choy, J.-W. J., and Thompson, C. K. (2007). Real-time comprehension of wh-movement in aphasia: Evidence from eyetracking while listening. *Brain and Language*, 100, 1-22.
- [7] Dickey, M. W., and Thompson, C. K. (2009). Automatic porcessing of wh- and NPmovement in agrammatic aphasia: Evidence from eyetracking. *Journal of Neurolinguistics*, 22, 563-583.
- [8] Fernald, A., Zangl, R., Portillo, A. L., and Marchman, V. A. (2008). Using eye movements to monitor spoken language comprehension by infants and young children. In Sekerina, I. A., Fernandez, E. M., and Clahsen, H. (Eds.), *Developmental Psycholinguistics: On-Line methods in Children's Language Processing.* (pp. 97-135). Amsterdam-Philadelphia: John Benjamins Publishing Company.
- [9] Hanne, S., Sekerina, I. A., Vasishth, S., Burchert, F., and De Bleser, R. (2011). Chance in Agrammatic Sentence ComprehensionWhat Does it Really Mean? Evidence from Eye Movements of German Agrammatic Aphasics. *Aphasiology*, 25, 221-244.
- [10] Huang, Y. T., and Snedeker, J. (2012). The use of lexical and referential cues in children's online processing of adjectives. *Developmental Psychology*, 1-13.
- [11] Huettig, F., Rommers, J., and Meyer, A. S. (2011). Using the visual world paradigm to study language processing: A review and critical evaluation. Acta Psychologica, 137, 151-171.
- [12] Lew-Williams, C., and Fernald, A. (2007). Young children learning Spanish make rapid use of grammatical gender in spoken word recognition. *Psychological Science*, 18(3), 193-198.
- [13] Lew-Williams, C., and Fernald, A. (2010). Real-time processing of gender-markedarticles by native and non-native Spanish speakers. *Journal of Memory and Language*, 63, 447-464.
- [14] Marian, V., and Spivey, M. (2003). Competing activation in bilingual language processing: Within- and between-language competition. *Bilingualism: Language and Cognition*, 6(2), 97-115.
- [15] McMurray, B., Samelson, V. M., Lee, S. H., and Tomblin, J. B. (2010). Individual differences in online spoken word recognition: Implications for SLI. *Cognitive Psychology*, 60(1), 1-39.
- [16] Meyer, A. M., Mack, J. E., and Thompson, C. K. (2012). Tracking passive sentence comprehension in agrammatic aphasia. *Journal of Neurolinguistics*, 25, 31-43.

- [17] Minai, U., Jincho, N., Yamane, N., and Mazuka, R. (2012). What hinders child semantic computation: Children's universal quantification and the development of cognitive control. *Journal of Child Language*, 39(5), 919-956.
- [18] Mirman, D., Yee, E., Blumstein, S. E., and Magnuson, J. S. (2011). Theories of spoken word recognition deficits in aphasia: Evidence from eye-tracking and computational modeling. *Brain and Language*, 117, 53-68.
- [19] Sekerina, I. A., and Trueswell, J. C. (2011). Processing of Contrastiveness by Heritage Russian Bilinguals. *Bilingualism: Language and Cognition*, 14(3), 280-300.
- [20] Sekerina, I. A., and Trueswell, J. C. (2011). Interactive processing of contrastive expressions by Russian children. *First Language*, 1-25.
- [21] Swingley, D., and Aslin, R.N. (2000). Spoken word recognition and lexical representation in very young children. *Cognition*, 76, 147-166.
- [22] Tanenhaus, M. K., Spivey-Knowlton, M. J., Eberhard, K. M., and Sedivy, J. C. (1995). Integration of visual and linguistic information in spoken language comprehension. *Science*, 268(5217), 1632-1634.
- [23] Trueswell, J. C., Sekerina, I. A., Hill, N., and Logrip, M. (1999). The kindergarten-path effect: Studying on-line sentence processing in young children. *Cognition*, 73, 89-134.
- [24] Trueswell, J. C., and Tanenhaus, M. K. (Eds.) (2004). Introduction: The Product and Action Approaches. (pp. 3-37). Approaches to Studying Word-Situated Language Use. Cambridge, MA: The M.I.T. Press.
- [25] Weber, A., and Cutler, A. (2004). Lexical competition in non-native spoken-word recognition. Journal of Memory and Language, 50, 1-25.